AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning page 5, line 22, with the following rewritten paragraph:

The operation of the system is explaining using the schematic diagram. In Fig. 3., the principle structure of this fermentation system is demonstrated a SFD (Schematic Flow Diagram). In this figure, A: fermentor, B: cross flow filtration for cell separation, C: pH indicator and controller, D: computer for calculation of feed rates of the substrate based on alkaline consumption rate, E: turbidity controller, using laser probe, P1, P2, and P3: peristaltic pumps are indicated. And *F*1: rate of alkaline flow-in to operate pH-stat culture, *F*2: rate of substrate flow-in determined from alkaline consumption rate, *F*3: rate of the medium that does not contain the glucose added for turbidity control flow-in, *F*4 and *F*5: cell free broth exit for feed back control of *F*1 and *F*2 respectively to control fermentation working volume constant, ~~*F5*~~ *F6*: broth exit, for feed back control of *F*3 to control the working volume constant.

Please replace the paragraph beginning page 7, line 6 with the following rewritten paragraph:

Strain used is *Lactococcus lactis* IO-1 (JCM7638) which was isolated by the inventor was used Stock culture stored in a deep freezer at -85°C was refreshed in TGC liquid medium (Difco Laboratories, Detroit) and transplanted into 100 ml medium containing in an Erlenmeyer flask for 8 h culture. The medium consisted of 3% of glucose, 0.5% of yeast extract, 0.5% of poly-peptone and 1% g of NaCl and autoclaved for 5 min at 120°C. Fermentation system employed is the same one shown in Fig. ~~2~~ 3. The fermentor is an glassware 1 liter jar with an inner agitation rd driven by magnetic force of gentle agitation 400 rpm. The jar was put in a water bath to which 37°C water was being circulated. An glass electrode for pH measurement (Toa Denpa Go. Tokyo)

was installed in the jar and pH of the culture liquid was controlled at the lower limit value (pH 6.0) by feeding of alkaline solution (1N-NaOH). Residual glucose level was periodically determined by an enzymatic glucose analyzer and when glucose concentration reached to 3 g/1 continuous culture was started by feeding of substrate the rate of which was calculated based on the rate of alkaline consumption rate. The relationship between glucose demand and alkaline consumption can be considered as the following. That is, the glucose quantity (G_Q) can be written by the following equation (3),

$$G_Q = \frac{fF_1 \times 90}{0.95} + C \quad (3)$$

where f is a coefficient of normality of 1N-NaOH and C is a term for adjustment of the residual glucose concentration. Glucose demand (g) is equivalent to lactic acid (M.W.=90) formation (g) which corresponds to the rate of 1N alkaline flow-in (F_1), however 5 % of the fed glucose should be lost for regeneration of [[F_2]] the microorganisms. Therefore, the glucose demand is divided by 0.95. Off-set of the control system can be adjusted by the term C according to monitoring residual glucose concentration.

Please replace the paragraph beginning page 10, line 19 with the following rewritten paragraph:

Microorganism, *Zymomonas mobilis* NRRL-B14023, was used. Stock culture stored in a deep freezer at -85°C was refreshed in YM liquid medium (Difco Laboratories, Detroit) and transplanted into 100 ml medium containing in an Erlenmeyer flask for 8 h culture. The medium consisted of 100 g of glucose, 10 g of yeast extract, 1 g of KH_2PO_4, 1 g of $(NH_4)_2P0_4$ and 0.5 g of $MgSO_4$. $7H_20$ in one liter of deionized water and autoclaved for 5 min at 120°C. Continuous culture was conducted in the fermentation system demonstrated in Fig. ~~2~~ 3.